

Colorectal Cancer:

The Importance of Prevention and Early Detection

The Burden of Colorectal Cancer

How Common Is Colorectal Cancer?

Colorectal cancer—cancer of the colon or rectum—is the second leading cause of cancer-related deaths in the United States. The American Cancer Society (ACS) estimates that 56,730 Americans will die of colorectal cancer this year. Colorectal cancer is also one of the most commonly diagnosed cancers in the United

States; approximately 146,940 new cases will be diagnosed in 2004.

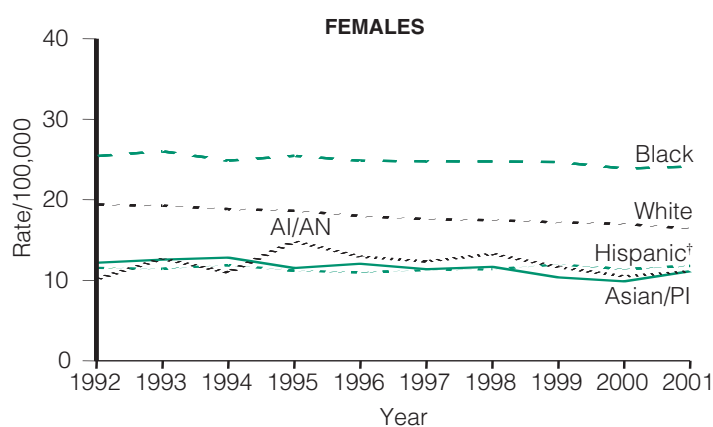
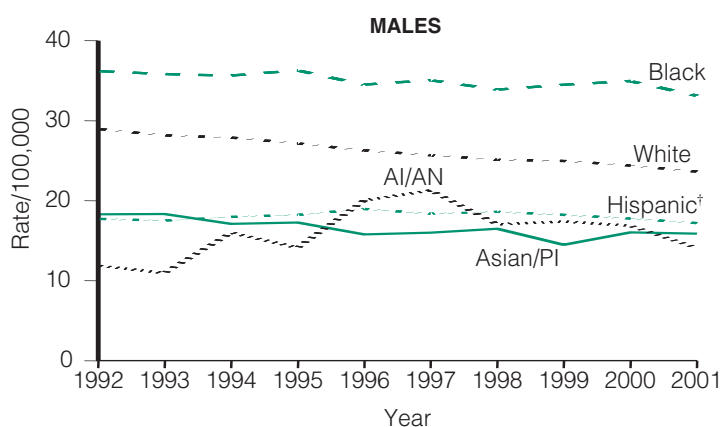
Colorectal cancer is the third most common cancer in men and in women.

Who Is at Risk?

The risk of developing colorectal cancer increases with advancing age, with more than 90% of cases occurring in persons aged 50 years or older.

Other risk factors include inflammatory bowel disease, a personal or family history of colorectal cancer or colorectal polyps, and certain hereditary syndromes. Lifestyle factors that may contribute to increased risk of colorectal cancer include lack of regular physical activity, low fruit and vegetable intake, a low-fiber and high-fat diet, obesity, alcohol consumption, and tobacco use.

Colorectal Cancer Death Rates* Among Men and Women, by Race/Ethnicity, United States, 1992–2001



*Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population.

†Hispanic and non-Hispanic are not mutually exclusive from White, Black, American Indian/Alaska Native (AI/AN), and Asian or Pacific Islander (Asian/PI).

Source: National Center for Health Statistics.

Prevention and Early Detection: Keys to Reducing Deaths

Reducing the number of deaths from colorectal cancer depends on detecting and removing precancerous colorectal polyps, as well as detecting and treating the cancer in its early stages. Colorectal cancer can be prevented by removing precancerous polyps or growths, which can be present in the colon for years before invasive cancer develops.

Four tests are recommended for colorectal cancer screening.

- The **fecal occult blood test (FOBT)**, which checks for hidden blood in three consecutive stool samples. One U.S. clinical trial reported a 33% reduction in colorectal cancer deaths and a 20% reduction in colorectal cancer incidence among people offered an *annual* FOBT. European, population-based trials have demonstrated that screening *every other year* reduced colorectal cancer deaths by 15% to 18%.
- In **flexible sigmoidoscopy** exams, physicians use a flexible, lighted tube (sigmoidoscope) to visually inspect the interior walls of the rectum and part of the colon. Case-control studies found that deaths from colorectal cancers located within reach of the

sigmoidoscope were 59% to 79% lower among people who had undergone a sigmoidoscopy than among those who had not had the procedure.

- In **colonoscopy** exams, physicians use a flexible, lighted tube (colonoscope), which is longer than the sigmoidoscope, to visually inspect the interior walls of the rectum and the entire colon. During this procedure, samples of tissue may be collected for closer examination or polyps may be removed. Colonoscopies can be used as screening tests or as follow-up diagnostic tools when the results of another screening test are positive.
- The **double-contrast barium enema** test comprises a series of X-rays of the colon and rectum, which are taken after the patient is given an enema containing barium dye followed by an injection of air in the lower bowel.

Another procedure, called a **digital rectal examination**, involves a physician inserting a lubricated, gloved finger into the rectum to feel for abnormalities. This test is not recommended as a screening method because it inspects only a limited area.

Screening for Colorectal Cancer

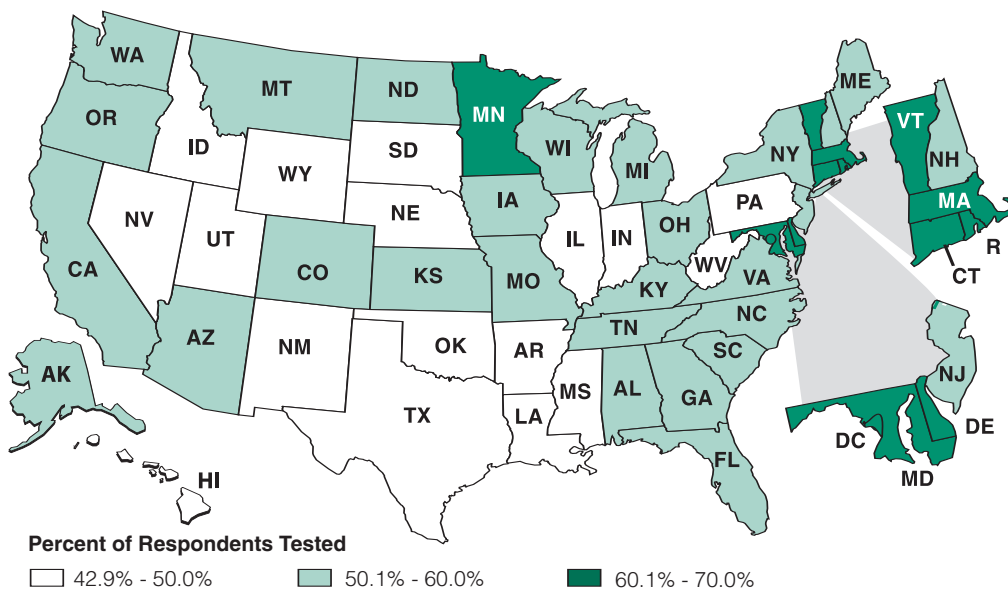
Current Guidelines

Several scientific organizations recommend regular screening for all adults aged 50 years or older. Recommended screening tests and intervals are as follows:

- FOBT every year.
- Flexible sigmoidoscopy every 5 years.
- Double-contrast barium enema every 5 years.
- Colonoscopy every 10 years.

Persons at higher risk should begin screening at a younger age and may need to be tested more frequently. Detailed guidelines for colorectal cancer screening have been collectively developed and endorsed by a diverse group of organizations, including the U.S. Preventive Services Task Force, other federal agencies, voluntary health organizations, and experts

Percentage of Adults Aged 50 Years or Older Who Had Colorectal Cancer Tests Within the Recommended Screening Intervals,* by State, 2002



*Fecal occult blood test within the past year and/or sigmoidoscopy/colonoscopy within the past 10 years.
Source: CDC, 2002 Behavioral Risk Factor Surveillance System.

from professional medical associations. These guidelines emphasize the key health benefit of colorectal cancer screening—finding and removing precancerous polyps, which either prevents the development of cancer or detects the disease at an early, more treatable stage.

Underuse of Screening

Screening for colorectal cancer lags far behind screening for breast and cervical cancers. Findings from the National Health Interview Survey (NHIS), which is administered by the Centers for Disease Control and Prevention (CDC), indicate that in 2000, only 42.5% of U.S. adults aged 50 years or older had undergone a

sigmoidoscopy or colonoscopy within the previous 10 years or had used an FOBT home test kit within the preceding year. Screening for colorectal cancer was particularly low among those respondents who lacked health insurance, those with no usual source of health care, and those who reported no doctor's visits within the preceding year.

Colorectal cancer screening remains underused, despite the availability of effective screening tests. Research findings underscore the need to increase awareness and promote the use of colorectal cancer screening examinations at regular intervals.

CDC's Activities Targeting Colorectal Cancer

One of the main goals of the national health objectives for 2010 is to reduce the colorectal cancer death rate. To help achieve this goal, CDC has implemented a broad-based colorectal cancer initiative designed to

- Increase public awareness of colorectal cancer.
- Increase awareness of screening guidelines among health care providers.
- Monitor national colorectal cancer screening rates.
- Promote increased patient-provider communication about colorectal cancer screening.

- Support quantitative and qualitative research efforts.
- Provide funding to state programs for colorectal cancer priorities.

With approximately \$15 million appropriated from Congress in fiscal year 2004, this CDC initiative is providing national leadership in support of colorectal cancer prevention and early detection. Major activities involved in the initiative include 1) building national and state partnerships, 2) promoting colorectal cancer screening nationwide, 3) supporting education and training for the public and health professionals, and 4) conducting surveillance and research efforts. The following sections describe some examples of these activities.

Building National and State Partnerships

- CDC continues its partnership in the National Colorectal Cancer Roundtable, a network of public and private organizations that promote colorectal cancer awareness and screening on the national level. CDC and ACS convened the roundtable in 1997.
- CDC supports the National Comprehensive Cancer Control Program (NCCCP), which integrates prevention and control activities relating to many forms of cancer, including colorectal cancer. The objectives are to use resources as efficiently as possible,

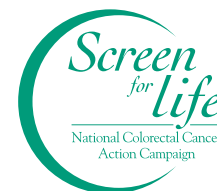
improve community-based education and health promotion, share expertise, and effectively address at-risk populations. With funding from CDC, the states of Alabama, Colorado, Georgia, Iowa, Massachusetts, Michigan, Utah, Washington, and West Virginia are implementing specific colorectal cancer strategies from their statewide, comprehensive cancer control plans. These programs may serve as models for other states in the future.

Promoting Colorectal Cancer Screening

Among the Public

Since 1999, CDC and the Centers for Medicare & Medicaid Services (CMS) have created and implemented *Screen for Life: A National Colorectal Cancer Action Campaign*, a multimedia effort promoting colorectal

cancer screening. The campaign informs Americans, particularly men and women aged 50 years or older, about colorectal cancer and the recommended screening methods. In addition, it informs



adults about the two ways that screening saves lives—by detecting colorectal cancer early, when treatment works best, or by finding precancerous polyps (growths) that can be removed before they become cancerous. Current campaign materials include TV public service announcements, posters, fact sheets, and brochures, plus new Spanish-language materials. These materials can be viewed, ordered, or downloaded at <http://www.cdc.gov/cancer/screenforlife/preview.htm>.

Among Health Care Professionals

CDC has developed a training program for health care providers entitled, *A Call to Action*, designed to increase their awareness of and knowledge about prevention and early detection of colorectal cancer. CDC also offers

Web-based tools that providers can use to help patients select screening options, which can be viewed, ordered, or downloaded at <http://www.cdc.gov/cancer/colorectal/calltoaction>. Furthermore, new behavioral research is under way among health professionals, with results expected in 2005.

Among Managed Care Organizations

CDC supported the development and feasibility testing of a colorectal cancer screening measure for addition to the Health Plan Employer Data and Information Set (HEDIS), a national system that monitors the quality of care and the performance of managed care plans. This measure was adopted by the National Committee for Quality Assurance and is part of HEDIS 2004.

Surveillance and Research

CDC is supporting epidemiologic and behavioral science research efforts related to colorectal cancer. Selected examples include projects focused on

- Evaluating national and state capacity to meet increasing demands for and costs of colorectal cancer screening and follow-up examinations, by surveying health care providers with endoscopic equipment for use in sigmoidoscopy or colonoscopy.
- Collecting, analyzing, and reporting colorectal cancer screening rates from ongoing national surveillance systems, such as the Behavioral Risk Factor Surveillance System and NHIS.
- Analyzing and reporting nationally representative data on physician and health system factors that may influence screening and diagnostic follow-up in community practice, in collaboration with the National Cancer Institute and CMS.
- Assessing the validity of self-reported colorectal cancer screening among members of three health maintenance organizations: Kaiser Permanente of Northern California, Kaiser Permanente of Georgia, and Health Partners Minneapolis.

- Examining whether patients with stage III (late-stage) colon cancer have received recommended therapy and assessing the quality of data collected from nine state cancer registries on colorectal cancer treatment.
- Collaborating with ACS to facilitate the development of safety and effectiveness standards for health care providers who perform colorectal cancer screening exams.

CDC is also funding intervention research designed to test strategies that may increase colorectal cancer screening. Following are examples of these projects.

- Morehouse School of Medicine is researching community-based strategies for increasing the use of colorectal cancer screening among African Americans in five metropolitan counties in Georgia.
- West Virginia University is working to increase colorectal cancer screening through a community-based intervention that focuses on members of rural Appalachian churches.
- The University of Massachusetts Medical School and the University of Pittsburgh Cancer Institute are conducting systems research to improve use of colorectal cancer screening in primary health care systems.

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